CENTER FOR DISEASE CONTROL

Morbidity and Mortality

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WEEKLY REPORT

For Week Ending July 13, 1974

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE
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EPIDEMIOLOGIC NOTES AND REPORTS HUMAN BRUCELLOSIS DUE TO STRAIN 19 BRUCELLA ABORTUS — Oklahoma

On April 23, 1974, a 32-year-old veterinarian accidentally injected an unknown quantity of *Brucella* vaccine (containing *Brucella abortus* strain 19) into his left palm. The needle had already been used to vaccinate a calf. Within an hour after the accident he began taking oral tetracycline, 500 mg 4 times/day. One and ½ hours after the incident he noted pain and swelling in his hand, and by the next day, it was markedly swollen and erythematous and so painful that he was unable to perform his usual activities. He also complained of fever, headache, nausea, and fatigue, which lasted several days. On April 25, a maculopapular rash appeared on his left

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in his hand had greatly subsided.

After 10 days of tetracycline therapy, he developed erythema and small urticaria-like lesions on the exposed parts of his body; the rash was most marked on the dorsum of his

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES (Cumulative totals include revised and delayed reports through previous weeks)

Name of Olivers	28th WEEK	ENDING	Manager	CUMULATIVE, FIRST 28 WEEKS					
DISEASE	July 13, 1974	July 14, 1973	MEDIAN 1969-1973	1974	1973	MEDIAN 1969-1973			
Aseptic meningitis	73	126	120	1,129	1,337	1,162			
Brucellosis	6	7	4	83	100	100			
Chickenpox	926	1,115	I HERE	95,970	141,557				
Diphtheria	manufact in	7	4	148	107	90			
Encephalitis:			CHARLES THE SECTION OF SECTION		THE HENDRIK	o a mathres			
Primary: Arthropod-borne and unspecified	14	44	32	449	617	602			
Post-Infectious	13	7	9	148	166	181			
Hepatitis, Viral:		and the same	religion al acres						
Type B	172	144	144	4.966	4,205	4,205			
Type A	760	1 000	1 000	23,064	TAPE DOWNERS				
Type unspecified	141	8 960	8 960	4,539	27,269	29,876			
Malaria	5	8	52	89	129	1,423			
Measles (rubeola)	256	247	325	18,639	22,967	25,507			
Meningococcal infections, total	32	27	27	826	912	1,561			
Civilian	32	26	26	804	889	1,379			
Military	mort testado	mar 41s	of littless in Import	22	23	156			
Mumps		855	941	41,690	51,729	62,905			
rertussis	38			698	or similar appr				
Rubella (German measles)	176	162	418	8,868	25,044	36,353			
Tetanus	50 32 Bul	3	a sylvan 3 bo	31	42	60			
Tuberculosis, new active	624	617		16,556	17,056				
Tularemia	3	7	8	72	85	78			
Typhoid fever	14	9	9	197	393	160			
Typhus, tick-borne (Rky. Mt. spotted fever)	47	30	23	377	312	202			
Venereal Diseases:	Shouldway N	Till lusti	Programme (1) 1 (1) (1)	Value and	100				
Gonorrhea	16,726	16,750		460.053	420,004				
Syphilis, primary and secondary	507	438		12,854	13,137	10			
Rabies in animals	47	49	56	1,486	2,019	2,019			

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.	A STATE OF THE PARTY AND VALUE OF THE PARTY	Cum.
Anthrax: Botulism: Calif. 2 Congenital rubella syndrome: Leprosy: Leptospirosis: Hawaii 1 Plague:	8 34 59 23	Poliomyelitis, total: Paralytic: Psittacosis: Fla. 1, Md. 1, Neb. 1. Rabies in man: Trichinosis: Typhus, murine: NYC 1	16 - 59

HUMAN BRUCELLOSIS - Continued

forearms, hand, and fingers. This was interpreted as a photosensitivity reaction to tetracycline, and his therapy was discontinued. He refused treatment with streptomycin. An interview 2 weeks after discontinuation of tetracycline therapy revealed that he had remained afebrile, but he noted the recurrence of mild pain in the left thumb and index finger.

The patient claimed that prior to the accident, he had never inoculated himself with *Brucella* vaccine or had clinical brucellosis. A serum specimen drawn 1 day after the inoculation was negative for *Brucella* agglutinating antibody. However, a convalescent specimen drawn 19 days later was positive at 1:40.

(Reported by George W. Prothro, M.D., Director, Betty Conrad, M.D., Chief, Communicable Diseases Division, and Fred A. Reynolds, M.D., Assistant Director for Personal Health Services, Tulsa City-County Health Department; Stanley W. Ferguson, Ph.D., State Epidemiologist, Oklahoma State Department of Health; and an EIS Officer.)
Editorial Note

Accidental exposure to strain 19 B. abortus is probably not an infrequent event, although few reported cases are found in the recent medical literature (1-3). The 2 most common types of exposure are (1) accidental inoculation of reconstituted vaccine into the hand, and (2) splashing of vaccine into the conjunctiva of the vaccinator. Illness is usually manifest in 1 of 2 ways:

1. A systemic illness very much like that due to "natural" strains of *B. abortus* may occur after an incubation period of 1-3 weeks.

2. A marked local reaction, including pain, erythema, edema, and occasionally sloughing of skin, may begin within hours after the injection. Some authors feel that this represents an accelerated delayed-type hypersensitivity reaction to brucellae or their components (e.g. endotoxin) (4).

The pronounced, local reaction reportedly occurs almost exclusively among persons who have a history of (a) clinical brucellosis, (b) serologic evidence of previous infection, or (c) a previous accidental exposure to strain 19. The case reported above is unusual since an accelerated reaction occurred in the absence of clinical or laboratory evidence of previous infection. However, the negative *Brucella* titer during the acute phase of the illness does not preclude a prior subclinical infection. Although *B. abortus* was not isolated from the patient's blood or wound, the clinical and serologic evidence are compatible with brucellosis due to *B. abortus* strain 19.

References

- 1. Spink WW: The significance of bacterial hypersensitivity in human brucellosis; studies on infection due to strain 19 *Brucella abortus*. Ann Int Med 47:861-874, 1957
- Sadusk JF Jr, Broune AS, Born JL: Brucellosis in man, resulting from Brucella abortus (strain 19) vaccine. JAMA 164:1325-1328, 1957
 Joffe B, Diamond MT: Brucellosis due to self-inoculation. Ann Int Med 65:564-565, 1966
- 4. Spink WW: Host-parasite relationship in brucellosis. Lancet 2:161-164, 1964.

WOUND BOTULISM - Idaho, Utah, California

Case 1

On May 25, 1974, a 25-year-old man from Rupert, Idaho, sustained a compound fracture-dislocation of his left ankle in a motorcycle accident in a rural area of Idaho. Later that day, after open surgical reduction of the fracture and closure of a laceration over the medial malleolus, a cast was applied. The patient was discharged from the hospital the next day. Two days later he developed pain in the ankle and was hospitalized again; the cast was removed the following day. Aerobic culture of purulent material from the wound yielded alphahemolytic streptococci; anaerobic cultures were not performed. The patient was treated in the hospital with warm soaks, elevation of the leg, and large intravenous doses of penicillin; cephalothin and gentamicin were later added.

On June 1, the patient experienced mild dysphagia. Two days later he complained of diplopia and symmetrical weakness of his extremities. He subsequently developed dysphagia, dysphonia, dyspnea, and urinary retention. Physical examination revealed a temperature of 104° F, symmetrical motor weakness in the distribution of cranial nerves 3, 4, 6, 7, and 9-12, marked weakness of his extremities without sensory deficit, absent deep tendon reflexes in both arms, and hypoactive reflexes in both legs. On June 5, he had a respiratory arrest from which he was successfully resuscitated; a tracheostomy was performed, and he was put on a respirator. His course was subsequently complicated by aspiration pneumonia.

On June 13, a diagnosis of wound botulism was considered. On June 14, the patient developed a severe urticarial reaction following a skin test with bivalent botulinal antitoxin. However, a skin test with trivalent botulinal antitoxin was negative, and he was given 1 vial of this antitoxin intramuscularly. On June 15, after transfer to a hospital in Salt Lake City, he received a second vial.

On June 16, the left ankle wound and joint were explored. A gram stain of serosanguinous fluid revealed no organisms. Anaerobic culture of the material yielded Clostridium botulinum type A. Identification of other microorganisms isolated from the wound is in progress. Pre- and post-treatment serum specimens were negative for botulinal toxin. An electromyogram performed on June 16 revealed decreased amplitude of the muscle action potential in response to a single stimulus and 30% facilitation with a stimulus frequency of 30 per second; these findings were compatible with the diagnosis of botulism.

Neurologic improvement was first noted on June 21. The patient remains hospitalized but continues to improve.

Epidemiologic investigation revealed that the patient had no history of eating home-canned or spoiled food during the 2 weeks prior to the onset of his illness.

Case 2

On June 21, 1974, a 33-year-old woman sustained lacerations of her forehead and left calf in an automobile acci-(Continued on page 251)

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING JULY 13, 1974 AND JULY 14, 1973 (28th WEEK)

NAME AND ADDRESS OF	ASEPTIC	BRUCEL-	CHICKEN-			HILL MAN	NCEPHALI	TIS	HEI	PATITIS, VI	RAL	MAL. 1974 5	
AREA	MENIN- GITIS	LOSIS	POX	DIPHT	HERIA		Arthropod- Unspecified	Post In- fectious	Type B	Туре А	Type Unspecified	MAL	ARIA
KENT NOT	1974	1974	1974	1974	Cum. 1974	1974	1973	1974	1974	1974	1974	1974	Cum 197
UNITED STATES	73	6	926	1,0	148	14	44	13	172	760	141	5	89
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Maine .*	-		5	-	-	-	-	-	-	10	3	-	-
New Hampshire *	1	-	8	-	-	-	-		-	3	-		-
Vermont		-	8	-	-	-	-	-	-	3	7		-
Massachusetts	-	-	-	-	-	_	1 -		-	3	6		1 3
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Illinois					1	_		1	13	31	12		2
Michigan	1	1-2	139	_	-	1	2	- 1	8	27	2	- 1	2
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uerto Rico												-	

*Delayed reports:

Aseptic Meningitis: La, delete 3, Okla, 2 Brucellosis: Okla, 1 Chickenpox: Me. 2, N.H. 6, Okla, 2, Calif. 28

Hepatitis B: N.H. 1, Okla. 2, 1973 Pa. 2 Hepatitis A: W. Va. delete 3, La. delete 1 Okla. 5, Guam 15, 1973 Pa. 2 Hepatitis, unspecified: Va. delete 1, Okla. 4, Guam 22

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING JULY 13, 1974 AND JULY 14, 1973 (28th WEEK) - Continued

UNITED STATES NEW ENGLAND Maine * New Hampshire Vermont Massachusetts Rhode Island Connecticut MIDDLE ATLANTIC Upstate New York New York City New Jersey * Pennsylvania EAST NORTH CENTRAL Ohio Indiana Illinois Michigan Wisconsin	256 14 1 11 2 144 58 20 36 30 46 10 3 18 12 3	Cumu 1974 18,639 870 39 197 57 358 57 162 7,577 792 501 5,431 853 7,248 2,987 205 1,793	1973 22,967 7,265 64 852 116 3,853 598 1,782 2,189 721 835 341 292 8,074	1974 32 1 - 1 - - - 4 1 1 - - 3	Cumu 1974 826 42 2 8 1 12 7 12 109 46 14 35	1973 912 41 1 6 2 11 3 18	1974 524 75 - 5 1 11 52 6	Cum. 1974 41,690 5,612 769 270 28 890 2,265 1,390	1974 38 	1974 176 4 	Cum. 1974 8,868 886 242 15 17 312 18 282	Cum. 1974 31
NEW ENGLAND Maine * New Hampshire Vermont Massachusetts Rhode Island Connecticut MIDDLE ATLANTIC Upstate New York New York City New Jersey * Pennsylvania EAST NORTH CENTRAL Ohio Indiana Illinois Michigan	256 14 1 11 2 144 58 20 36 30 46 10 3 18 12 3	18,639 870 39 197 57 358 57 162 7,577 792 501 5,431 853 7,248 2,987 205	22,967 7,265 64 852 116 3,853 598 1,782 2,189 721 835 341 292 8,074	32 1 1 - - - - - 4 1 1 - - - - - - - - - -	826 42 2 8 1 12 7 12 109 46 14	912 41 1 6 2 11 3 18	524 75 - 5 1 11 52 6	1974 41,690 5,612 769 270 28 890 2,265	38	176 4 - - 3	1974 8,868 886 242 15 17 312 18	31
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Illinois	18 12 3		278	2	33	51	20	2,949	-	3	479	2
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Georgia	3	209	146 325	7	7 53	19 34	28	1,316	2 -	3	142	- 4
EAST SOUTH CENTRAL	4	173	585	4	92	85	102	5,226	11	16	465	2
Kentucky	3	113	361	1.	37	31	44	2,133	2	9	169	
Tennessee		33	165	3	42	33	46	2,250	6	7	225	1000
Alabama	1	14	5 54		9	14	8	475 368	3	da n	56 15	1
EST SOUTH CENTRAL	1	162	619	6	142	140	41	2,848	8	0.5	287	2
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Utah	(Table 9	199	1	1 E-20	4 3	2 2		18	_	7 -1	14 33	0. 0
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Washington	77.75	55	987	1.	8	16	5	1,506	NATIONAL PROPERTY.	S - 171	325	
Oregon	-		444	TO E1.	9	12	13	723	2	8	190	1
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Measles: Me. 1, Iowa 8, Alaska delete 1, Guam 4 Meningococcal infections: Alaska 1 Mumps: Me. 4, Guam 14 Pertussis: Okla. 1 Rubella: N.J. delete 1, La. delete 3, Guam 1 *Delayed reports:

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING JULY 13, 1974 AND JULY 14, 1973 (28th WEEK) - Continued

		RCULOSIS	TULA-		HOID		S-FEVER BORNE				RABIES			
AREA	(New Active)		REMIA	FE	VER	(Rky. Mt.	potted fever)	1947	GONORRH	EA	SYP	HILIS (Pri.	& Sec.)	ANIMAL
Anex		Cum.	Cum.		Cum.		Cum.	1000	Cum	ulative		Cum	ulative	Cum.
	1974	1974	1974	1974	1974	1974	1974	1974	1974	1973	1974	1974	1973	1974
UNITED STATES	624	16,556	72	14	197	47	377	16,726	460,053	420,004	507	12,854	13,137	1,486
NEW ENGLAND	26	673	1 5 <u>3</u> 14	4-2	6	2	4	496	10,867	11,607	14	262	381	10
Maine	6	56	_	-	_	-	-	46	880	646	_	16	12	1
New Hampshire *	110-	16	-	-	1		- N	16	378	398	2	9	4	2
Vermont	2	13	-		- 4	_		6	330	177	-	1	13	1
Massachusetts	8	372	-		2	1	2	223	4,563	5,594	6	106	192	3
Rhode Island	-	61	-	-	2	1	2	56	1,065	1,187	-	10	9	3
Connecticut	10	155	i dīni	do T o	100	-	11-14	149	3,651	3,605	6	120	151	My -
MIDDLE ATLANTIC	121	2,921	2	-17-24	30	10	38	1,592	55,048	58,638	96	2,839	3,014	16
Upstate New York	14	399	2		6	7	19	184	10,302	10,625	8	280	188	9
New York City	49	1,117		-	20	-		720	23,849	27,295	70	1,635	1,878	-
New Jersey	32	564	1.5	1	4	2	4	166	7,652	8,345	6	454	539	-
Pennsylvania	26	841	HIE-II	-	-	1	17	522	13,245	12,373	12	470	409	7
EAST NORTH CENTRAL	97	2,222	5	+	17	1	6	2,025	66,421	48,682	28	930	739	98
Ohio	17	612	-	-	5	1	4	480	19,863	15,490	3	150	156	
Indiana	8	337	-		1		25-05	241	6,906	5,847	- 1	100	172	10
Illinois	31	644	3		6		2	518	15,915	7,256	19	410	104	22
Michigan	38	583	-	-	4	_	-	483	16,533	14,951	6	219	266	1
Wisconsin	3	46	2		1		8-1	303	7,204	5,138	-	51	41	65
WEST NORTH CENTRAL	19	595	13	1	7		4	992	23,959	23,037	14	318	176	358
Minnesota	5	100		1111111	3	100	132	249	5,380	4,662	17	44	58	143
lowa	2	62	_	1	i	-	1	96	3,166	3,050		19	35	81
Missouri	8	296	9	0 4.	1	_	3	344	7,710	7,890	12	217	61	22
North Dakota	1	15	2	11-1	_	_		9	364	334		3	1	71
South Dakota	17.7	33	2	-			32 - T	65	1,146	1,200	_	2	3	
Nebraska		30	1021	0 0211		100	1 2 2	87	1,993	2,411	2	7	2	3
Kansas	3	59	-	- 1	2	_		142	4,200	3,490	U-10	26	16	38
COURTH ATT ANTIC	142	2 4/2			20	29	224	4 115	117 010	105 053	160		2 000	101
OUTH ATLANTIC Delaware	142	3,443	8	10.20	28	-	221	4,115	117,819	105,853	169	4,124	3,809	191
Maryland	15	463	-		2	3	33	584	11,906	1,430 8,880	10	407	389	7
District of Columbia	3	216	10.00	- I	î		1 2	330	8,631	8,580	15	346	453	1.00
Virginia	27	430	3	. 15.11	150	6	68	413	9,967	10,399	19	451	375	58
West Virginia *	3	165		-	7	100	1	43	1,350	1,639		9	111	23
North Carolina *	29	541	3		3	4	55	559	15,254	15,620	27	512	327	15
South Carolina	6	340	-	-	2	9	38	470	12,640	11,387	27	473	562	3
Georgia	31	464	2	-	2	7	21	812	24,486	20,423	18	450	626	57
Florida	27	778	-	-	10		2	815	31,997	27,495	52	1,431	1,010	27
EAST SOUTH CENTRAL	36	1,477	7	3	23	3	52	1,538	39,543	35,269	22	655	867	154
Kentucky	1772	342	1	3	12	_	4	197	4,854	4,352	7	151	321	97
Tennessee	8	490	4	100	9	2	35	610	15,479	13,219	10	259	239	37
Alabama	14	428	2	_	2	-	6	416	10,868	10,087	2	127	98	19
Mississippi	14	217	-	1	. e To	1	7	315	8,342	7,611	3	118	209	1
WEST SOUTH CENTRAL	76	2,176	31	5	19	717071	44	2,672	63,691	57,512	51	1,231	1,491	379
WEST SOUTH CENTRAL	7	276	21	3	1	-	7	158	6,230	6,980	31	63	86	49
Arkansas	5	252	2	5	7			661	12,990		24	356	451	19
Oklahoma *		162	6		- 1		31		5,386	5,810		75	98	87
Texas	64	1,486	2		10	3 - 1	6	1,853	39,085	32,712	27	737	856	224
31 1 1 1 1		To de log	1.55-			100	100	.1. 440	A-read	100-110-20	V21-A	4 to 4 C	- N	
MOUNTAIN	13	541	4	-	12	1	6	796	17,598	15,456	10	308	430	83
Montana		43	T .	_	-	V	1	42	992	885	- 0	3	3	1,12-6
Idaho	1	12	1	_	3	40		35	1,020	888	11	7	7	7
Wyoming	3	103	1.6	-		T	12	12	365	262 4,049	2	5	20	6
Colorado	4	110	2		2			215 115	4,831 2,582		2	70 41	123 46	27 24
New Mexico	. 4	199	1 1	_	6		1 <u>1 1</u> 1	210	5,393	2,762 4,477	2	119	89	25
Arizona		20	91	1 =	-	1	201	59	947	811		9	8	1
Nevada		33	_	1 2	1	-	1700	108	1,468	1,322	5	54	134	-
F		25	164				ba. L		,3 J	So 1 54	actus.	II ushno	Same and	
PACIFIC	94 10	2,508 166	2	5	55 11	1	2	2,500 213	65,107	63,950 5,844	103	2,187	2,230	197
Washington	6	104	1 +	- 2	"	1	2	276	5,627	5,571	3	45	38	8
Oregon	72	2,001	2	5	43	1	2	1,938	50,614	49,753	100	2,057	2,013	182
California	- '-	49	o nic		7.	Linds Word	2 1	34	1,406	1,598		10	45	7
Hawaii	6	188	-		1	-	_	39	1,428	1,184		22	51	· · · · ·
_ nprecise from a		Unit III	100	118%							21.44		to de place	11511
Guam .*		24	-	-	a tra = 15.	la S-me	1-110	70.00-0	154	168	-	2	1	_
Puerto Rico	10	297	-	=	2		-	115	1,708	2,357	20	473	429	32
Virgin Islands		3			_	_		6	165	126	_	20	13	

Delayed reports:

Tuberculosis: Okla. 5, Guam 3 Typhoid: Okla. 1 RMSF: Okla. 2

Gonorrhea: La. delete 12, Okla. 169, Guam 19 Syphilis: N.H. delete 1, Okla. 1, Alaska 7 Rabies: W. Va. 2, N.C. 1, Okla. 1

Morbidity and Mortality Weekly Report

Week No. 28

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING JULY 13, 1974

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Albany, N. Y. Allentown, Pa. Buffalo, N. Y. Camden, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. Newark, N. J. Paterson, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	823 239 39 40 39 68 31 30 31 57 72 9 65 40 63 2,970 62 30 159 60 31 53	65 years and over 497 121 27 25 28 38 18 20 23 35 43 6 42 23 48 1,819 37	45-64 years 223 74 8 12 11 16 9 8 6 13 22 3 15 12 14	25-44 years 41 12 3 - 8 2 - 3 4 - 3 3 3	Under 1 year 25 12 2 - 4 1 - 5	monia and Influenza All Ages 46 14 6 7 2 1 2 3 1 - 3	Area SOUTH ATLANTIC Atlanta, Ga. Baltimore, Md. Charlotte, N. C. Jacksonville, Fla. Miami, Fla. Norfolk, Va. Richmond, Va. Savannah, Ga.	All Ages 1,331 90 209 62 94 174 65 103	65 years and over 700 45 104 34 53 81 29 51	45-64 years 411 30 69 16 23 61 26 40	25-44 years 102 8 15 6 10 12 5 3	Under 1 year 65 2 8 5 7 12 3	monia and Influenz All Age 40 2 4 -
Boston, Mass. Bridgeport, Conn. Cambridge, Mass. Fall River, Mass. Hartford, Conn. Lowell, Mass. Lynn, Mass. New Bedford, Mass, New Haven, Conn. Providence, R. I. Somerville, Mass. Springfield, Mass. Waterbury, Conn. Worcester, Mass. Widdle, Mass. Waterbury, Conn. Worcester, Mass. MIDDLE ATLANTIC Albany, N. Y. Allentown, Pa. Buffalo, N. Y. Camden, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. Newark, N. J. Newark, N. J. Paterson, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Rechester, N. Y. Schenectady, N. Scranton, Pa. Syracuse, N. Y.	239 39 40 39 68 31 30 31 57 72 9 65 40 63 2,970 62 30 159 60 31 53	121 27 25 28 38 18 20 23 35 43 6 42 23 48	74 8 12 11 16 9 8 6 13 22 3 15 12	12 3 3 - 8 2 - - 3 4 - 3	12 - - 2 - - 4 1	14 6 7 2 1 2 3	Atlanta, Ga. Baltimore, Md. Charlotte, N. C. Jacksonville, Fla. Miami, Fla. Norfolk, Va. Richmond, Va. Savannah, Ga.	90 209 62 94 174 65 103	45 104 34 53 81 29 51	30 69 16 23 61 26	8 15 6 10 12 5	2 8 5 7 12 3	2 4 - - 3
Boston, Mass. Bridgeport, Conn. Cambridge, Mass. Fall River, Mass. Hartford, Conn. Lowell, Mass. Lynn, Mass. New Bedford, Mass, New Haven, Conn. Providence, R. I. Somerville, Mass. Springfield, Mass. Waterbury, Conn. Worcester, Mass. Widdle, Mass. Waterbury, Conn. Worcester, Mass. MIDDLE ATLANTIC Albany, N. Y. Allentown, Pa. Buffalo, N. Y. Camden, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. Newark, N. J. Newark, N. J. Paterson, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Rechester, N. Y. Schenectady, N. Scranton, Pa. Syracuse, N. Y.	39 40 39 68 31 30 31 57 72 9 65 40 63 2,970 62 30 159 60 31	27 25 28 38 18 20 23 35 43 6 42 23 48	8 12 11 16 9 8 6 13 22 3 15 12	3 3 - 8 2 - - 3 4 - 3	- - 2 - - 4 1	6 7 2 1 2 3 1	Atlanta, Ga. Baltimore, Md. Charlotte, N. C. Jacksonville, Fla. Miami, Fla. Norfolk, Va. Richmond, Va. Savannah, Ga.	90 209 62 94 174 65 103	45 104 34 53 81 29 51	30 69 16 23 61 26	8 15 6 10 12 5	2 8 5 7 12 3	2 4 - - 3
Bridgeport, Conn. Cambridge, Mass. Fall River, Mass. Hartford, Conn. Lowell, Mass. Lynn, Mass. New Bedford, Mass. New Haven, Conn. Providence, R. I. Somerville, Mass. Springfield, Mass. Waterbury, Conn. Worcester, Mass. MIDDLE ATLANTIC Albany, N. Y. Allentown, Pa Buffalo, N. Y. Camden, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. Newark, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Scranton, Pa. Syracuse, N. Y.	40 39 68 31 30 31 57 72 9 65 40 63 2,970 62 30 159 60 31	25 28 38 18 20 23 35 43 6 42 23 48	12 11 16 9 8 6 13 22 3 15 12	3 - 8 2 - - 3 4 - 3	- 2 - - 4 1	7 2 1 2 3 1	Baltimore, Md. Charlotte, N. C. Jacksonville, Fla. Miami, Fla. Norfolk, Va. Richmond, Va. Savannah, Ga.	209 62 94 174 65 103	104 34 53 81 29 51	69 16 23 61 26	15 6 10 12 5	8 5 7 12 3	4 - - 3
Cambridge, Mass. Fall River, Mass. Hartford, Conn. Lowell, Mass. Lynn, Mass. New Bedford, Mass. New Bedwen, Conn. Providence, R. I. Somerville, Mass. Springfield, Mass. Waterbury, Conn. Worcester, Mass. MIDDLE ATLANTIC Albany, N. Y. Allentown, Pa. Buffalo, N. Y. Camden, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. Newark, N. J. Newark, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Reding, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	39 68 31 30 31 57 72 9 65 40 63 2,970 62 30 159 60 31 53	28 38 18 20 23 35 43 6 42 23 48	11 16 9 8 6 13 22 3 15 12	- 8 2 - - 3 4 - 3	- 2 - - 4 1	2 1 2 3 1	Charlotte, N. C. Jacksonville, Fla. Miami. Fla. Norfolk, Va. Richmond, Va. Savannah, Ga.	62 94 174 65 103	34 53 81 29 51	16 23 61 26	6 10 12 5	5 7 12 3	3
Fall River, Mass. Hartford, Conn. Lowell, Mass. Lynn, Mass. New Bedford, Mass. New Haven, Conn. Providence, R. I. Somerville, Mass. Springfield, Mass. Waterbury, Conn. Worcester, Mass. Waterbury, Conn. Worcester, Mass. WIDDLE ATLANTIC Albany, N. Y. Allentown, Pa. Buffalo, N. Y. Camden, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. Newark, N. J. Newark, N. J. Paterson, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	68 31 30 31 57 72 9 65 40 63 2,970 62 30 159 60 31 53	38 18 20 23 35 43 6 42 23 48	16 9 8 6 13 22 3 15 12	8 2 - 3 4 - 3	2 - - 4 1	1 2 3 1	Jacksonville, Fla. Miami, Fla. Norfolk, Va. Richmond, Va. Savannah, Ga.	94 174 65 103	53 81 29 51	23 61 26	10 12 5	7 12 3	3
Hartford, Conn. Lowell, Mass. Lynn, Mass. New Bedford, Mass. New Haven, Conn. Providence, R. I. Somerville, Mass. Springfield, Mass. Waterbury, Conn. Worcester, Mass. MIDDLE ATLANTIC Albany, N. Y. Allentown, Pa. Buffalo, N. Y. Camden, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. Newark, N. J. Paterson, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Reoding, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	31 30 31 57 72 9 65 40 63 2,970 62 30 159 60 31 53	18 20 23 35 43 6 42 23 48	9 8 6 13 22 3 15 12	2 - - 3 4 - 3	- - 4 1	2 3 1 -	Miami, Fla	174 65 103	81 29 51	61 26	12 5	12	3
Lowell, Mass. Lynn, Mass. New Bedford, Mass. New Haven, Conn. Providence, R. I. Somerville, Mass. Springfield, Mass. Waterbury, Conn. Worcester, Mass. MIDDLE ATLANTIC Albany, N. Y. Allentown, Pa. Buffalo, N. Y. Camden, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. Newark, N. J. Paterson, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Scranton, Pa. Syracuse, N. Y.	30 31 57 72 9 65 40 63 2,970 62 30 159 60 31 53	20 23 35 43 6 42 23 48	8 6 13 22 3 15 12	- 3 4 - 3	1	3 1 —	Norfolk, Va	65 103	29 51	26	5	3	
Lynn, Mass. New Bedford, Mass. New Haven, Conn. Providence, R. I. Somerville, Mass. Springfield, Mass. Waterbury, Conn. Worcester, Mass. MIDDLE ATLANTIC Albany, N. Y. Allentown, Pa. Buffalo, N. Y. Camden, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. Newark, N. J. Newark, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	31 57 72 9 65 40 63 2,970 62 30 159 60 31 53	23 35 43 6 42 23 48	6 13 22 3 15 12	3 4 - 3	1	1	Richmond, Va	103	51				5
New Bedford, Mass. New Haven, Conn. Providence, R. I. Somerville, Mass. Springfield, Mass. Waterbury, Conn. Worcester, Mass. MIDDLE ATLANTIC Albany, N. Y. Allentown, Pa. Buffalo, N. Y. Camden, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. New York City, N. Y. Paterson, N. J. Philadelphia, Pa. Prittsburgh, Pa. Reading, Pa. Reading, Pa. Rechester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	57 72 9 65 40 63 2,970 62 30 159 60 31 53	35 43 6 42 23 48	13 22 3 15 12 14	4 - 3	1	-	Savannah, Ga			70		4	8
New Haven, Conn. Providence, R. I. Somerville, Mass. Springfield, Mass. Waterbury, Conn. Worcester, Mass. MIDDLE ATLANTIC Albany, N. Y. Allentown, Pa. Buffalo, N. Y. Camden, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. New York City, N. Y. Paterson, N. J. Philadelphia, Pa. Prittsburgh, Pa. Reading, Pa. Reading, Pa. Rechester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	72 9 65 40 63 2,970 62 30 159 60 31 53	43 6 42 23 48	22 3 15 12 14	4 - 3	1			42	19	18	5	_	2
Providence, R. I. Somerville, Mass. Springfield, Mass. Springfield, Mass. Waterbury, Conn. Worcester, Mass. MIDDLE ATLANTIC Albany, N. Y. Allentown, Pa. Buffalo, N. Y. Camden, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. Newark, N. J. Newark, N. J. Philadelphia, Pa. Prittsburgh, Pa. Reading, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	9 65 40 63 2,970 62 30 159 60 31 53	6 42 23 48	3 15 12 14	3	196.	3	St. Petersburg, Fla	69	55	8	3	3	3
Somerville, Mass. Springfield, Mass. Waterbury, Conn. Worcester, Mass. ### Mass. ###	65 40 63 2,970 62 30 159 60 31 53	42 23 48 1,819	15 12 14	3	5		Tampa, Fla.	87	58	20	2	4	8
Springfield, Mass. Waterbury, Conn. Worcester, Mass. HIDDLE ATLANTIC Albany, N. Y. Allentown, Pa. Buffalo, N. Y. Camden, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. NewYork City, N. Y. Paterson, N. J. Philadelphia, Pa. Prittsburgh, Pa. Reading, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Scranton, Pa. Syracuse, N. Y.	40 63 2,970 62 30 159 60 31 53	23 48 1,819	12 14		5	10-	Washington, D. C.	266	129	83	26	17	4
Waterbury, Conn. Worcester, Mass. #IDDLE ATLANTIC Albany, N. Y. Allentown, Pa. Buffalo, N. Y. Camden, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. New York City, N. Y. Paterson, N. J. Philadelphia, Pa. Prittsburgh, Pa. Reading, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	63 2,970 62 30 159 60 31 53	1,819	14	3	_	4	Wilmington, Del.	70	42	17	7	_	1
Worcester, Mass. MIDDLE ATLANTIC Albany, N. Y. Allentown, Pa. Buffalo, N. Y. Camden, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. Newark, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	2,970 62 30 159 60 31 53	1,819	337		1		The state of the s		1 0 15	11.14		7.520	
Albany, N. Y. Allentown, Pa. Buffalo, N. Y. Camden, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. New York City, N. Y. Paterson, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	62 30 159 60 31 53				Mil - 1	3	EAST SOUTH CENTRAL	623	352	172	44	23	20
Albany, N. Y. Allentown, Pa. Buffalo, N. Y. Camden, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. New York City, N. Y. Paterson, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	62 30 159 60 31 53				125	13.1	Birmingham, Ala	109	54	34	4	12	4
Albany, N. Y. Allentown, Pa. Buffalo, N. Y. Camden, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. New York City, N. Y. Paterson, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	30 159 60 31 53	37	750	194	103	131	Chattanooga, Tenn	45	20	14	4	2	6
Allentown, Pa. Buffalo, N. Y. Camden, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. New York City, N. Y. Paterson, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	159 60 31 53		15	4	3	-	Knoxville, Tenn.	39	27	7	3	1 1	- 1-
Buffalo, N. Y. Camden, N. J. Elizabeth, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. New York City, N. Y. Paterson, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	60 31 53	21	8	1	-	1	Louisville, Ky	116	64	30	11	4	3
Camden, N. J. Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. New York City, N. Y. Paterson, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	31 53	92	42	12	6	12	Memphis, Tenn.	130	77	37	10	1	1
Elizabeth, N. J. Erie, Pa. Jersey City, N. J. Newark, N. J. New York City, N. Y. Paterson, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	53	38	14	1	5	5	Mobile, Ala,	61	35	18	4	1	
Erie, Pa Jersey City, N. J. Newark, N. J. New York City, N. Y. Paterson, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.		15	12	3	-	3	Montgomery, Ala.	39	27	7	4	_	4
Jersey City, N. J. Newark, N. J. New York City, N. Y. Paterson, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	67	32	16	3		2	Nashville, Tenn.	84	48	25	4	2	2
Newark, N. J. New York City, N. Y. T. Paterson, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	67	41	16	4	5	2	Table telling						
New York City, N. Y	104	51	22	13	11	10	WEST SOUTH CENTRAL	1,176	625	317	103	62	27
Paterson, N. J. Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	1,376	836	361	92	46	47		46	26	11	2	7	
Philadelphia, Pa. Pittsburgh, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	45	30	6	2	3	4	Austin, Tex	31	21	6	2	i	14.0
Pittsburgh, Pa. Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	298	187	73	21	6	3		27	13	8	3	l i	
Reading, Pa. Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	219	134	53	13	12	13	Corpus Christi, Tex	219	110	62	25	7	
Rochester, N. Y. Schenectady, N. Y. Scranton, Pa. Syracuse, N. Y.	49	29	16	2	1	2	Dallas, Tex.	59	33	8	5	5	
Schenectady, N. Y Scranton, Pa	131	96	23	6		9	El Paso, Tex.			27	9		1
Scranton, Pa	40	23	15	_	- L		Fort Worth, Tex	90	44			6	6
Syracuse, N. Y.	44	30	14	_	_	3	Houston, Tex.	217	113	66	17	10	
	114	62	26	12	5	1	Little Rock, Ark	79	47	19	8	1	12 11 3
	37	25	8	4		4	New Orleans, La.	149	73	42	16	10	
Trenton, N. J.	20	17	2	1	-	4	San Antonio, Tex	142	75	34	10	11	
Utica, N. Y.	31	23	8	1000		6	Shreveport, La	51 66	28 42	18 16	3	3	1
Yonkers, N. Y.		1.6	30h 1 3	17,000		. 44	Tuisa, Okia.	00	42	10	,	20.3	
AST NORTH CENTRAL	2,702	1,566	740	178	101	71	MOUNTAIN	584	312	160	48	33	13
Akron, Ohio	63	35	15	5	3	16-	Albuquerque, N. Mex	38	19	9	5	3	T die
Canton, Ohio	47	28	13	2	3	1	Colorado Springs, Colo.	31	13	10	2	4	1 2
Chicago, Ill.	721	420	192	53	24	16	Denver, Colo	147	74	44	11	10	
Cincinnati, Ohio	167	94	49	9	5	3	Las Vegas, Nev	33	13	15	_	2	10.00
Cleveland, Ohio	178	110	49	7	5	1	Ogden, Utah	23	15	6	2	_	1
Columbus, Ohio	136	70	38	9	11	3	Phoenix, Ariz.	136	74	35	11	11	
Dayton, Ohio	115	60	41	3	4	1	Pueblo, Colo.	22	13	5	2		
Detroit, Mich.	339	199	99	23	6	7	Salt Lake City, Utah	62	39	8	8	2	
Evansville, Ind.	36	25	7	3	1	- 1	Tucson, Ariz.	92	52	28	7	1	
Fort Wayne, Ind.	63	43	16	2	1	3	Tueson, Title.		175			17.18	200
Gary, Ind.	27	11	10	3	1	2	PACIFIC	1,824	1,104	477	119	63	3-
Grand Rapids, Mich	88	50	26	6	3	11	Berkeley, Calif.	11	8	2	1		
Indianapolis, Ind.	208	110	61	22	6	2	Fresno, Calif.	71	34	25	4	5	
Madison, Wis.	45	23	10	6	3	- 4	Glendale, Calif.	21	17	4			
Milwaukee, Wis.	146	93	37	6	3	4	Honolulu, Hawaii *	58	30	17	5	4	- 0
Peoria, Ill.	51	35	9	1	6		Long Beach, Calif.	90	52	32	ī	5	
Rockford, Ill.	45	26	14	2	2	9	Los Angeles, Calif	613	391	147	42	12	1
South Bend, Ind.	46	26	9	6	2	3		103	57	31	6		OUNTY
Toledo, Ohio	110	69	21	5	12	1	Oakland, Calif	46				5	
Youngstown, Ohio	71	39	24	5	'2	1.7.3	Portland, Oreg.	118	32 79	12 22	1 6	8	755
Toungstown, Onto	1	1	-7				Sacramento, Calif		45	27	5		
VEST NORTHCENTRAL	860	547	189	51	32	31	San Diego, Calif.	127	69	32	11	2	
Des Moines, Iowa	63	43	13	2	3	1		127				6	1
Duluth, Minn.	30	18	9	1 1			San Francisco, Calif.	179	108	47	13	6	
	42	21	12	i	1	1		58	33	13	7	3	
Kansas City, Kans	137	90	29	7	3	5	Seattle, Wash.	135	82	33	10	7	
Kansas City, Mo.	33	19	9	2	2	4	Spokane, Wash	61	42	14	3	-	10000
Lincoln, Nebr.	116	80	17	7	7	3	Tacoma, Wash	49	25	19	4	-	11000
Minneapolis, Minn	108	70	23	6	4	1					471		
Omaha, Nebr.	230	144	58	14	5	12	Total	12,893	7,522	3,439	880	507	41.
St. Louis, Mo.	61	42	12	4	2	2	10141	-,-,-		1		110	
St. Paul, Minn	01	20	7	7	5	2	Expected Number	11,718	6,771				32

[†] Delayed report for Week ending July 6, 1974 *Estimate based on average percent of divisional total

BOTULISM - Continued

dent in Oakland, California. The calf laceration extended into muscle. The lacerations were initially cleaned and dressed at home; later that day the patient went to a hospital emergency room where they were again cleaned and sutured. On June 23, she noted pain and swelling in the region of the calf laceration. On June 26, she experienced blurred vision, and over the next 3 days she developed diplopia, dysphagia, dysphonia, and dyspnea. She was hospitalized on the evening of June 30.

On July 1, she had a low grade fever (peak oral temperature of 99.6°F), a normal sensorium, and evidence of motor impairment in the distribution of cranial nerves 3, 4, 6, 7, 9, 10, and 12. Her peripheral muscle strength and deep tendon reflexes were slightly diminished bilaterally, and her sensory examination was normal. The patient's white blood cell count was 9,800 with 64% polymorphonuclear leukocytes and 6% bands. A lumbar puncture revealed normal spinal fluid, and a Tensilon* test resulted in slight transient improvement in her ptosis.

On July 2, a diagnosis of wound botulism was considered. Treatment consisted of high-dose intravenous penicillin therapy initiated on July 1 and extensive debridement of the left calf wound. The patient subsequently received a total of 5 vials of trivalent botulinal antitoxin on July 2 and 3.

Results of electromyography on July 3 were compatible with a diagnosis of botulism. Neurologic improvement, first noted on July 4, has continued, and the patient has not required ventilatory assistance. Her vital capacity increased from 1200 cc on July 1 to 1850 cc on July 9.

A gram stain of purulent material aspirated from the wound on July 1 revealed gram-positive bacilli. Anaerobic culture of this material has yielded *C. botulinum* type B, *Clostridium perfringens*, and 2 other, as yet unidentified, organisms. Type B botulinal toxin was detected in a pretreatment serum specimen; 3 post-treatment serum specimens were negative for toxin.

Epidemiologic investigation revealed that the patient had consumed no home-canned or spoiled foods during the 2 weeks prior to the onset of her illness; her husband and children remain well.

The patient, a passenger in the front seat at the time of the accident, remained in the car but struck her leg on the

*Inclusion of trade names does not imply endorsement by the Public Health Service or the U.S. Department of Health, Education, and Welfare.

car tape recorder. Anaerobic cultures obtained from the car are currently being processed.

(Reported by Don C. Pates, M.D., Howard W. Crawford, M.D., private physicians, Rupert; James M. Lansche, M.D., private neurologist, Pocatello; John Mather, M.D., State Epidemiologist, Idaho State Department of Environmental and Community Services; Gerald Moress, M.D., private physician, Salt Lake City; Taira Fukushima, M.D., Director, Bureau of Disease Prevention, Utah State Division of Health; Eugene Eisenberg, M.D., Richard C. Nagel, M.D., private physicians, Berkeley; Thaddeus F. Midura, Ph.D., and Genevieve S. Nygaard, Microbial Diseases Laboratory, Ronald R. Roberto, M.D., Medical Epidemiologist, and James Chin, M.D., Chief, Infectious Disease Section, California State Department of Health; the Anaerobe Section, Enterobacteriology Branch, Bacteriology Division, Bureau of Laboratories, CDC; and 2 EIS Officers.)

Editorial Note

These are the 13th and 14th reported cases of wound botulism in the United States since 1943 and the 3rd and 4th cases reported to CDC this year (1-3). The California case is the second caused by C. botulinum type B.

The necessity for thorough debridement of wounds in patients with suspected wound botulism cannot be overemphasized. The first patient had been receiving high doses of penicillin for 4 days prior to development of neurologic symptoms, suggesting that antibiotics alone will not eradicate the organism. The second patient began to improve neurologically 2 days after adequate wound debridement and antitoxin administration.

The immediate appearance of a severe urticarial reaction following a skin test with bivalent botulinal antitoxin in the first patient, who subsequently received a skin test and 2 vials of trivalent antitoxin without complications, is consistent with the observation that allergic reactions more frequently follow administration of the bivalent preparation (4).

In contrast to most previous cases of wound botulism, the second patient's wound was not grossly contaminated with dirt. She was wearing clean slacks at the time of the accident.

References

- 1. Merson MH, Dowell VR Jr: Epidemiologic, clinical, and laboratory aspects of wound botulism. N Engl J Med 289:1005-1010, 1973
- 2. Center for Disease Control: Morbidity and Mortality Weekly Rep 22(47):395-396, 24 Nov 1973
- 3. Center for Disease Control: Morbidity and Mortality Weekly Rep 23(16):141-142, 1974
- 4. Merson MH, Hughes JM, Dowell VR Jr, et al: Current trends in botulism in the United States. JAMA in press

BOVINE ANTHRAX – Texas

Between June 25 and July 17, 1974, an estimated 175-200 cattle have died of probable anthrax in eastern Falls County, Texas. Two horses, I mule, and I goat have also died of suspect anthrax. Presently, no confirmed cases have been reported from premises (farms) outside Falls County. No human anthrax cases have been reported. Bacillus anthracis was isolated in pure culture from at least 3 affected animals from 2 herds. Criteria for identification of B. anthracis included

(1) staining characteristics, (2) typical appearance of non-hemolytic colonies on blood agar, (3) nonmotility, and (4) susceptibility to gamma phage and penicillin.

Control measures include (1) burning of carcasses, (2) quarantine of livestock in the eastern half of Falls County, and (3) a proposed vaccination campaign which will include cattle, horses, sheep, and goats.

An additional 10-13 bovine deaths occurred in a single

ANTHRAX - Continued

consignment of cattle in the Oklahoma City Stockyards which were reportedly shipped from Sulphur Springs, Texas. Laboratory examination of specimens is underway to determine if these deaths were due to anthrax. Movement of livestock from Texas into Oklahoma is currently prohibited. In Oklahoma City, only cattle from the affected consignment are quarantined.

Arkansas has also prohibited movement of cattle from Texas.

(Reported by H. Q. Sibley, D.V.M., Executive Director, Carl Watson, D.V.M., Area 8 Veterinarian, and James B. Young, D.V.M., Staff Veterinarian, Texas Animal Health Commission; A. B. Rich, D.V.M., Director, Division of Veterinary Public Health, Texas State Health Department; William L. Sippel, D.V.M., Ph.D., Executive Director, Howard W. Whitford, D.V.M., Staff Bacteriologist, Texas Veterinary Medical Diagnostic Laboratory; Stanley W. Ferguson, Ph.D., State Epidemiologist, Oklahoma State Department of Health; John W. Holcombe, D.V.M., State Public Health Veterinarian, Okla-

homa State Department of Agriculture; Richard M. Thomas, D.V.M., Ph.D., Director, Livestock and Poultry Commission, State of Arkansas Department of Commerce; and the Bacterial Zoonoses Branch, Bacterial Disease Division, Bureau of Epidemiology, CDC.)

Editorial Note

Animal anthrax is generally considered to be a soil-borne disease which may reach epizootic proportions during periods of unusual climatic conditions. Cutaneous anthrax has previously been reported in persons having direct contact with carcasses of animals dying from anthrax (1). Although ingestion of contaminated meat is another potential source of human infection, this mode of transmission is rare in countries, such as the United States, where animals are inspected for evidence of disease before and after slaughter.

Reference

1. Brachman PS: Human anthrax in the United States. Antimicrob Agents Chemother, 1965, pp. 111-114

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Director, Center for Disease Control Director, Bureau of Epidemiology, CDC Editor, MMWR Managing Editor, MMWR David J. Sencer, M.D. Philip S. Brachman, M.D. Michael B. Gregg, M.D. Deborah L. Jones, B.S.

The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

in addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to:

Center for Disease Control Attn: Editor Morbidity and Mortality Weekly Report Atlanta, Georgia 30333

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE CENTER FOR DISEASE CONTROL ATLANTA, GEORGIA 30333

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